FAA-E-2200
April 29, 1965

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
SPECIFICATION

PUMP, VACUUM, MOTOR DRIVEN

1. SCOPE AND CLASSIFICATION

1.1 Scope.- This specification states the minimum requirements for a motor driven vacuum pump. It is anticipated that presently available commercial units will meet these requirements.

1.2 Classification.- Two types of vacuum pumps, differing primarily in size, are specified herein:

Type I - 2 cubic feet per minute
Type II - 5 cubic feet per minute

2. APPLICABLE SPECIFICATION

2.1 Specification .- The following Federal specification , of the issue in effect on the date of invitation for bids or request for proposals, forms a part of this specification to the extent specified herein:

CC-M-636	Motor Fractional Horsepower (Alternating Current)

(Information on obtaining copies of Federal specifications may be obtained from General Services Administration offices in Washington, D. C., Seattle, San Francisco, Denver, Kansas City, Mo., Chicago, Atlanta, New York and Boston.)

(Copies of this specification may be obtained from the Federal Aviation Agency, Washington, D. C. 20553, ATTN: Contracting Officer. Requests should fully identify material described, i. e., specification number and date, and should state the contract involved or other use to be made of the requested material).

3. REQUIREMENTS

3.1 Equipment to be furnished by the contractor. - The items to be furnished under this specification shall be a high vacuum pump, belt driven by an electric motor, mounted on a base plate, and equipped with carrying handle or handles. The discharge side of the pump shall provide the connections for a vacuum breaker, a dial vacuum gauge with a 30 inch range and an oil filter and drain connection back into the pump discharge.

3.2 Main and required characteristics

3.2.1 Pump. - The vacuum pump shall be capable of creating a blank-off vacuum of 29.9998 inches (referred to as a 30 inch barometer) which is equivalent to 5 microns of mercury absolute pressure. The pump shall be a two stage high vacuum pump for the servicing of refrigeration equipment. It shall be designed to meet modern dehydration and degassing requirements of this service. It shall be a compact unit of sturdy design with rugged working parts and of simple design to permit field maintenance without the aid of special tools or skill.

3.2.1.1 Pump capacity. - Type I shall have a minimum rated displacement of 2 cubic feet per minute at rated speed, sea level pressure, and with an ambient temperature of 70°F. Type II shall be rated at 5 cubic feet per minute under the same conditions.

3.2.2 Motor. - The electric motor shall be designed to operate from 115-volt, 60 cycle single phase electric power with a 10 foot three conductor cord, switch and a grounding type plug. It shall be capacitor start motor in accordance with Specification CC-M-636. The motor for Type I shall be rated at not less than 1/4 horsepower; the motor for Type II shall be rated at not less than 1/3 horsepower.

3.2.3 Accessories . - The following accessories shall be provided with the vacuum pump: an oil filter to remove particles from the air discharge and with a drain connection back into the pump discharge, a vacuum breaker and a vacuum gauge with a 30 inch dial range and a minimum diameter of 2 inch.

3.2.4 Finish. - The vacuum pump, motor, mount and accessories shall have a minimum protection of one prime coat and an enamel finish coat.

3.3 Technical publications . - Two copies of an operating manual shall be packed with each unit. Each manual shall include the following: manufacturer's name and address, manufacturer's part number for all parts (for ordering purposes), contract number, the main and required characteristics required by this specification, and operating instructions for the equipment to include wiring diagrams and maintenance procedures. The contractor's name and address shall be included if different from that of the manufacturer.

3.4 Workmanship - Workmanship shall be of the highest quality commensurate with best commercial practice and shall evidence journeyman knowledge of each function being performed. Poor workmanship for any portion of the unit shall be cause for rejection of the complete unit.

4. INSPECTION AND TESTS

4.1 Inspection . - The vacuum pump and motor unit and the preparation for delivery thereof shall be given such inspection as may be necessary to determine conformance with the requirements of this specification.

4.2 Tests . - The vacuum pump shall be tested for compliance with the requirements of this specification. The Government may accept a certificate of compliance in lieu of these tests.

5. PREPARATION FOR DELIVERY

5.1 Packaging.- Each complete unit shall be packaged for prolonged shelf life and commercial shipment and reshipment using good commercial packing methods and materials.

5.2 Marking.- Each package shall be clearly marked to show the manufacturer's name and address, manufacturer's model number, contract number and the words "Pump, Vacuum, Motor Driven, Type I, 2 cfm" or "Pump, Vacuum, Motor Driven, Type II , 5 cfm", as applicable.

6. NOTES

6.1 None

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